www.InBody.com

For Convenient Use

InBody230

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The most ideal and convenient system for health care

The revolutionary technology in BIA has created a new standard

Leading novel technology provides the accurate results you can trust
- Body Composition
- Obesity Diagnosis: BMI, Percent Body Fat, WHR
- Segmental Analysis for Fat and Lean Mass
- Guidance for weight management
- Exercise planner for effective exercise

Advanced design and features to fulfill your needs
- Easy to carry and install
- Easy to operate
- Easy to transfer the results through a USB memory stick
- Useful accessories and much more

BIOSPACE

Available Options

Lookin'Body

Manage all clients' results at your fingertip

InBody230 comes with a perfect solution to organize all personal results in your own computer.

Thermal Printer

A small and handy printer can be attached to the InBody230.

InBody Bag

Specially designed bag helps to store and carry InBody230.

SD400

A solution to connect InBody with more than one compatible device.

InBody230, Providing Detailed Information You Can Use

- To monitor body composition at a glance
With the shape of the weight/skeletal muscle mass/body fat mass graphs on the results sheet, you can easily check the current state of body composition and body shape.

- To get accurate obesity diagnosis
No longer be misguided by weight alone. Utilizing both BMI and Percentage of Body Fat (PBF), you can more accurately discover underweight and overweight obesity by considering muscle and fat values, rather than just total body weight.

- To monitor direct changes in muscle mass in each part of the body
When pursuing a training or weight loss program, the segmental lean analysis becomes imperative by showing if muscle mass has developed or decreased in each arm, leg and the trunk. The InBody230 provides validation that the program works for each individual.

Unique design and worldwide patented technology ...

BIOSPACE

... with proven accuracy and effectiveness.

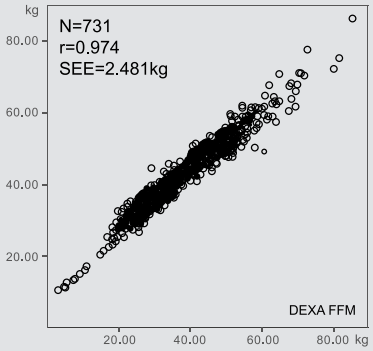
Correlation study with DEXA shows that InBody is highly accurate (r=0.974).

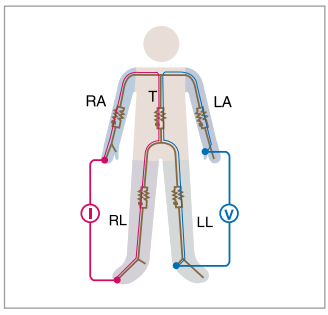
InBody is the only body composition analyzer which offers the high correlation coefficient near 0.98 comparing with DEXA.

*Male : 343, Female : 388

	N	Minimum	Maximum	Mean	Std. Deviation
Age (years)	731	5.00	88.00	40.09	17.54
Height (cm)	731	106.50	193.00	162.42	10.43
Weight (kg)	731	17.30	118.30	60.60	13.59

InBody FFM

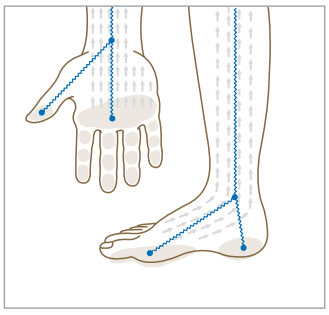




Direct Segmental Measurement

Biospace's segmental analysis method is world widely patented technology.
It makes measurements absolutely accurate by producing impedance values for each different segment: 4 limbs and trunk.

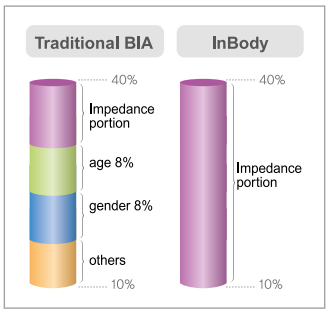
- Accurate impedance measurement of trunk is the key to bioimpedance technology.
- No population specific statistics (empirical factors) are used in calculation.



8-Point Tactile Electrode System

It has enhanced accuracy by fixing the measurement starting point.

- The fixed measurement starting points of the body guarantee high reproducibility.
- It also minimizes error rates due to different placement of electrodes in hands and feet.



No Use of Empirical Estimation

With direct segmental measurement and 8-point tactile electrode method, the InBody does not need empirical factors in calculation.

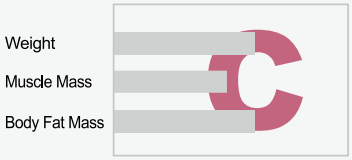
- High accuracy is guaranteed by precise assessment of the trunk.
- All the data solely depends on the measurements, not relying on gender or age.

For Adults

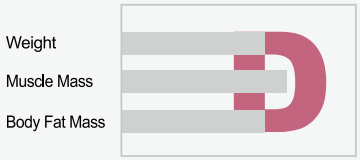
Results Interpretation

Body Composition

Pay attention to the shape formed by bars of Weight / Skeletal Muscle Mass / Fat Mass.



'C' shape : Fat mass is relatively more than muscle content.



'D' shape : Muscle mass has been increased and fat mass has been reduced. Expect a stronger body.

Obesity Diagnosis

BMI alone can not judge obesity. BMI and Percent Body Fat must be considered together for accurate obesity diagnosis.

	Value	Normal Range
BMI Body Mass Index (kg/m²)	20.0	18.5 ~ 25.0
PBF Percent Body Fat (%)	29.0	18.0 ~ 28.0

Normal BMI with high PBF ; Sarcopenic and Obese Body

	Value	Normal Range
BMI Body Mass Index (kg/m²)	26.0	18.5 ~ 25.0
PBF Percent Body Fat (%)	24.0	18.0 ~ 28.0

High BMI but normal PBF; Well- built Body

	Value	Normal Range
BMI Body Mass Index (kg/m²)	20.0	18.5 ~ 25.0
PBF Percent Body Fat (%)	24.0	18.0 ~ 28.0

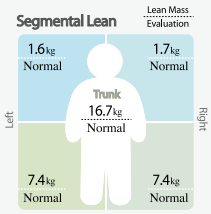
Both BMI and PBF are normal; Healthy Body

	Value	Normal Range
BMI Body Mass Index (kg/m²)	26.5	18.5 ~ 25.0
PBF Percent Body Fat (%)	31.0	18.0 ~ 28.0

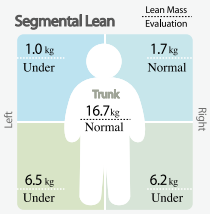
Both BMI and PBF are high; Obese Body

Segmental Lean

Maintain Segmental Lean Mass in the either "Normal" or "Over" and check body balance between upper and lower and between left and right.



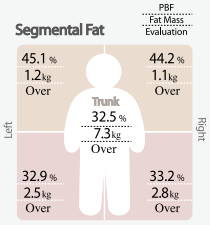
A well-balanced body with enough muscle in each segment.



Imbalance between the 2 arms and not enough muscle in legs.

Segmental Fat

Monitor Percent Body Fat of each segment and manage it in the "Normal".



Result of the evaluation says "Over" meaning excessive fat is stored in each segment. Try to lower the Percent Body Fat.

※ Segmental fat analysis is estimated calculation based on other results and it can not be measured directly by the BIA method.

Exercise Planner

Plan your exercise based on body composition state.

❶

Exercise Planner

Plan your weekly exercises from the followings and estimate your weight loss from these activities.

Energy expenditure of each activity(base weight: 51.6kg / Duration: 30min. / unit: kcal)

Walking 102	Jogging 178	Bicycle 153	Swim 178	Mountain Climbing 166	Aerobic 178
Table tennis 115	Tennis 153	Football 178	Oriental Fencing 255	Gate ball 97	Badminton 115
Racket ball 255	Tae-kwon-do 255	Squash 255	Basketball 153	Rope jumping 178	Golf 90
Push-ups development of upper body	Sit-ups abdominal muscle training	Weight training backache prevention	Dumbbell exercise muscle strength	Elastic band muscle strength	Squats maintenance of lower body muscle

Calculation for expected total weight loss for a month (one month = 4 weeks)

Total energy expenditure (kcal/week) × 4 weeks ÷ 7700

❷

• How To

1. Choose practicable and preferable activities from the left.
2. Energy expenditure for each is calculated when it is done for 30 min.
3. Choose exercises that you are going to do for 7 days.
4. Calculate the total energy expenditure for a week.
5. Estimate expected total weight loss for a month using the formula shown below.

❸

• Recommended calorie intake per day

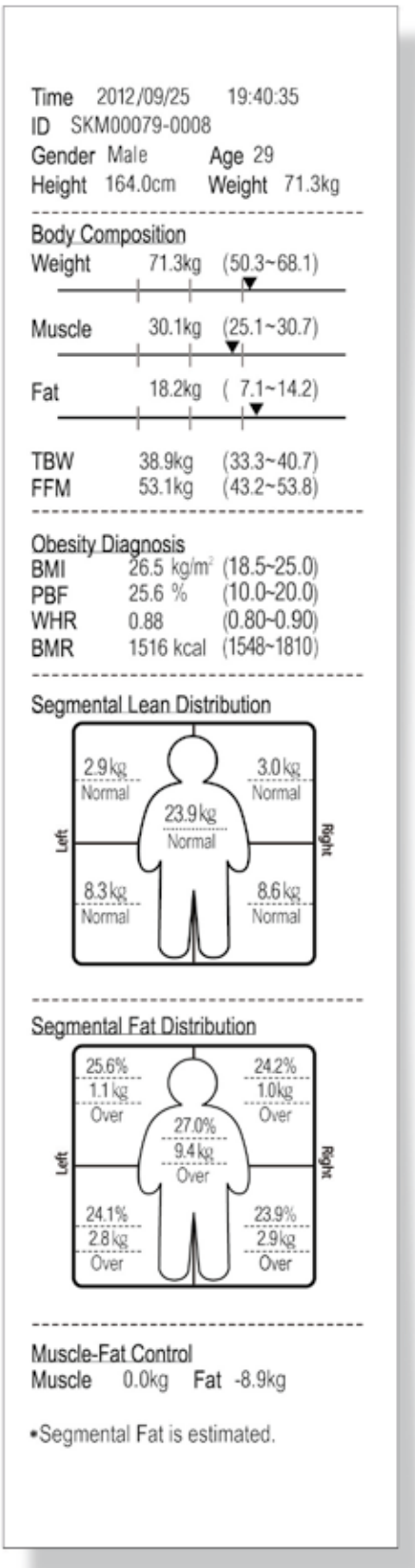
1400 kcal

❶ You can choose your preferable exercise and know the consumption of calories

❷ Easy explanation lets you understand how to use the Exercise Planner

❸ Recommended calorie intake per day is provided with consideration of your body state

Results from the Thermal Printer



The Results Sheet

InBody

ID	SKM00079-0008	Height	164cm	Date	2012.9.25
Age	29	Gender	Male	Time	19:40:35

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Body Composition

	Under	Normal	Over	Normal Range
Weight		71.3 kg		50.3 ~ 68.1
Muscle Mass (Skeletal Muscle Mass)		30.1 kg		25.1 ~ 30.7
Body Fat Mass		30.1 kg		7.1 ~ 14.2

TBW (Total Body Water)	38.9 kg (33.3 ~ 40.7)	FFM (Fat Free Mass)	53.1 kg (43.2 ~ 53.8)

Segmental Lean

Lean Mass Evaluation

Obesity Diagnosis

	Value	Normal Range
BMI (Body Mass Index) (kg/m²)	26.5	18.5 ~ 25.0
PBF (Percent Body Fat) (%)	25.6	10.0 ~ 20.0
WHR (Waist Hip Ratio)	0.88	0.80 ~ 0.90
BMR (Basal Metabolic Rate) (kcal)	1516	1548 ~ 1810

$$BMI = \frac{\text{Weight, kg}}{(\text{Height, m})^2}$$

$$PBF = \frac{\text{Fat, kg}}{\text{Weight, kg}} \times 100$$

$$WHR = \frac{\text{Waist circumference, cm}}{\text{Hip circumference, cm}}$$

Segmental Fat

PBF Fat Mass Evaluation

* Segmental Fat is estimated.

Muscle-Fat Control

Muscle Control	0.0 kg	Fat Control	- 8.9 kg

Impedance

Z	RA	LA	TR	RL	LL
20kHz	286.5	298.3	27.0	218.7	231.1
100kHz	250.7	262.4	23.1	189.1	200.9

* Use your results as reference when consulting with your physician or fitness trainer.

Exercise Planner

Plan your weekly exercises from the followings and estimate your weight loss from these activities.

Energy expenditure of each activity(base weight: 51.6kg / Duration: 30min. / unit: kcal)

Walking 143	Jogging 250	Bicycle 214	Swim 250	Mountain Climbing 232	Aerobic 250
Table tennis 161	Tennis 214	Football 250	Oriental Fencing 357	Gate ball 135	Badminton 161
Racket ball 357	Tae-kwon-do 357	Squash 357	Basketball 214	Rope jumping 250	Golf 125
Push-ups (development of upper body)	Sit-ups (abdominal muscle training)	Weight training (backache prevention)	Dumbbell exercise (muscle strength)	Elastic band (muscle strength)	Squats (maintenance of lower body muscle)

• How To

1. Choose practicable and preferable activities from the left.
2. Energy expenditure for each is calculated when it is done for 30 min.
3. Choose exercises that you are going to do for 7 days.
4. Calculate the total energy expenditure for a week.
5. Estimate expected total weight loss for a month using the formula shown below.

Calculation for expected total weight loss for a month (one month = 4 weeks)

Total energy expenditure (kcal/week) × 4 weeks ÷ 7700

• Recommended calorie intake per day

1600 *kcal*

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InBody230 Specifications

Key specifications

Bioelectrical Impedance Analysis(BIA) Measurement Items	Impedance(Z)	10 Impedance measurements by using 2 different frequencies(20kHz, 100kHz) at each of 5 segments of the body(Right Arm, Left Arm, Trunk, Right Leg, Left Leg)
Electrode Method	Tetrapolar 8-Point Tactile Electrode System	
Measurement Method	Direct Segmental Multi-frequency Bioelectrical Impedance Analysis Method, DSM-BIA method	
Body Composition Calculation Method	No use of Empirical Estimation	
Outputs	For Adults	Weight, Skeletal Muscle Mass, Body Fat Mass, Total Body Water, Fat Free Mass BMI, Percent Body Fat, Waist-Hip Ratio(WHR), Basal Metabolic Rate(BMR), Muscle Control, Fat Control Segmental Analysis of Lean and Fat(Right arm, Left arm, Trunk, Right leg, Left leg), Impedance at Each Segment & Frequency, Exercise Planner(Option)
	For Children	Height, Body Water, Protein, Mineral, Body Fat, Weight, Skeletal Muscle Mass, Segmental Lean Evaluation Growth Chart(Height, Weight), Target Weight, Weight Control, Muscle Control, Fat Control BMI, Percent Body Fat, Child Obesity Degree, Basal Metabolic Rate(BMR), Growth Score Impedance at Each Segment & Frequency

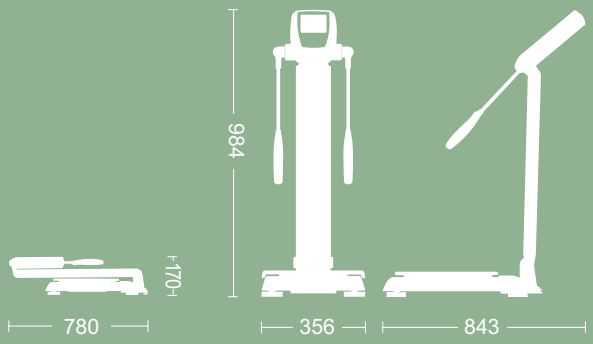
Functional specifications

Logo Display	Possible to input name of the user's place, address and contact number
Type of Results Sheet	Basic : Body composition results sheet for adults(Printed Paper/Blank Paper) Body composition results sheet for children(Printed Paper/Blank Paper) Option: Thermal results sheet(when using thermal printer)
Portability	Foldable body stand part, Portable carrying bag
Sound	Possible to turn the beep sound on during measurement
Measurement Screen	Results of measurement and the process of measurement will be displayed on Color LCD
Data Storage	Possible to save the results when ID is entered (Up to 1,000 measurements)
Printer Connection	USB port

Other specifications

Applied Rating Current	330㎂
Power Consumption	50VA
Adapter	Power Input AC100-240V, 50/60Hz, 1.2A Power Output DC 12V, 3.5A
Display Type	240×320 Touch Color LCD
External Interface	RS-232C 1EA, USB Slave 1EA, USB Host 1EA
Compatible Printer	Laser/Inkjet PCL 3 or above and SPL(Printer recommended by BIOSPACE), Thermal Printer(Optional)
Dimensions	356(W)×843(L)×984(H): mm 14.0(W)×33.2(L)×38.7(H): inch
Machine Weight	14.5kg(32.0lb.)
Measurement Duration	30sec.
Operation Environment	10 ~ 40°(50 ~ 104°F), 30 ~ 80%RH, 50 ~ 106kPa
Storage Environment	0 ~ 40°(32 ~ 104°F), 30 ~ 80%RH, 50 ~ 106kPa(No condensation)
Weight Range	10 ~ 250kg(22 ~ 551lb.)
Height Range	85 ~ 220cm(3ft. 1.4in. ~ 7ft. 2.6in.)
Age Range	3 ~ 99years

* Specifications are subject to change without prior notice.



Biospace is body composition analyzer maker that acquired numerous patent rights in Europe and Japan amounting to 80 patent rights in different countries.

CE 0120 NAWI ISO9001 ISO13485 U.S. patent U.S. 5720296 Canada patent C.N. 2225184 Japan patent Korean Food & Drug Administration

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